

Patent Claims

1. A wind power machine for production of energy, having at least one rotor element (5) which can be driven by the wind and having an output load (15), in particular a generator (16), which is connected directly or indirectly to the rotor element (5),

characterized

in that the rotor element (5) drives one or more hydraulic pumps (7) directly or indirectly.

2. A wind power machine for production of energy, having at least one rotor element (5) which can be driven by the wind and having an output load (15), in particular a generator (16), which is connected directly or indirectly to the rotor element (5), characterized in that two or more hydraulic pumps (7) can be connected via at least one regulation device (20) as a function of the power output level of the rotor element (5), in particular as a function of the torque or rotation speed of the rotor element (5).

3. A wind power machine for production of energy, having at least one rotor element (5), which can be driven by the wind and having an output load (15), in particular a generator (16), which is connected directly or indirectly to the rotor element (5), characterized in that one or more wind power machines or two or more hydraulic pumps (7) feed two or more generators (16) and/or output loads (15) in a manner

which can be controlled as a function of the power output level.

4. The wind power machine as claimed in Claim 3, characterized in that the at least one generator (16) and/or output load (15) is subdivided into different power levels, and can be distributed to the at least one generator (16) and/or output load (15) on a power-output specific basis via at least one control device (21) depending on the power which is emitted by the at least one wind power machine (R_1 to R_3).

5. The wind power machine as claimed in at least one of Claims 1 to 4, characterized in that two or more wind power machines have two or more hydraulic pumps (7) which can be connected and supply, on a power-specific basis, two or more generators (16) and/or output loads (15) which can be connected and can be controlled.

6. The wind power machine as claimed in at least one of Claims 2 to 5, characterized in that the two or more hydraulic pumps (7) can be connected selectively via controllable control devices (20) for power optimization, with the hydraulic pumps (7) being arranged in different power levels in the pylon attachment (4).

7. The wind power machine as claimed in at least one of Claims 1 to 6, characterized in that a transmission element (22) is connected between the rotor element (5) and the hydraulic pumps (7) in order to drive the two or more hydraulic pumps (7) in the pylon attachment (4).

8. The wind power machine as claimed in at least one of Claims 2 to 7, characterized in that two or more generators (16) and/or output loads (15) can be driven via a monitoring unit (23) in different power output level levels of at least one wind power machine (R_1 to R_3), in particular of at least one hydraulic pump (7), in each case individually controllable and at least partially as a function of the power output level and/or pressure.

9. The wind power machine as claimed in at least one of Claims 1 to 8, characterized in that the at least one hydraulic pump (7) is connected to an output load (15), in particular to a generator (16), and drives it.

10. The wind power machine as claimed in at least one of Claims 1 to 9, characterized in that the output load (15), in particular the generator (16), can be driven externally by the wind power machine, in particular by the rotor element (5) via the hydraulic pump (7).

11. The wind power machine as claimed in at least one of Claims 1 to 10, characterized in that two or more individual wind power machines (R_1 , R_2) can be connected by means of rotor elements (5) and connected hydraulic pumps (7) to a common output load (15), in particular to a common generator (16), and drive it.

12. The wind power machine as claimed in at least one of Claims 1 to 11, characterized in that the hydraulic pump (7) is connected directly to the rotor element (5) and is

connected via lines (8, 9) to a converter (14) for a generator (16), with the converter (14) driving the generator (16).

13. The wind power machine as claimed in at least one of Claims 1 to 12, characterized in that a controllable restriction element (11) and/or a controllable valve (12) is inserted in at least one line (8, 9) for open-loop and/or closed-loop control and/or for braking.

14. The wind power machine as claimed in at least one of Claims 1 to 13, characterized in that at least one pressure equalization device (13), in particular a pressure equalization container for pressure and/or pulsation equalization, is inserted between the hydraulic pump (7) and the output load (15), in particular the generator (16).

15. The wind power machine as claimed in at least one of Claims 1 to 14, characterized in that the rotor element (5) drives the hydraulic pump (7) via a rotor shaft (6).

16. The wind power machine as claimed in at least one of Claims 1 to 15, characterized in that this wind power machine has a pylon (1) and, at its end, a pylon attachment (4) which can rotate, with the rotor element (5) being mounted in the pylon attachment (4) such that it can rotate, and being connected to the hydraulic pump (7) there.

17. The wind power machine as claimed in Claim 16, characterized in that the lines (8, 9) are passed via a coupling (10), such that they are decoupled in terms of

rotation, through the pylon (1) to an output load (15), in particular a generator (16), which is arranged in the pylon (1), on the pylon (1) or externally from the pylon (1).

18. The wind power machine as claimed in Claim 16 or 17, characterized in that two or more hydraulic pumps (7) for different wind power machines (R_1 , R_2) can be connected to at least one generator (16).

19. The wind power machine as claimed in at least one of Claims 1 to 18, characterized in that two or more wind power machines (R_1 , R_2) can each be connected via a line (8) and a return line (9) to a common supply line (18) and to a common return line (19), to which at least one converter (14) is connected, and to which converter (14) at least one output load (15) and/or generator (16) is connected.

20. The wind power machine as claimed in at least one of Claims 1 to 19, characterized in that the output load (15) is in the form of a pump for feeding the water to a reservoir at a higher level.

21. The wind power machine as claimed in Claim 20, characterized in that the reservoir which is at a higher level is connected to a turbine, which is at the lower level, for driving a generator (16).